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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,357	06/23/2003	Ludmila Cherkasova	200311047-1	7467

22879 7590 04/06/2010
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ART UNIT	**PAPER NUMBER**
2454	

NOTIFICATION DATE	DELIVERY MODE
04/06/2010	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LUDMILA CHERKASOVA

Appeal 2009-005930[1]
Application 10/601,357
Technology Center 2400

Decided: April 5, 2010

Before JOHN A. JEFFERY, THU A. DANG, and STEPHEN C. SIU, *Administrative Patent Judges.*

JEFFERY, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1-4, 6-14, 16, 18-21, and 23-39. We have jurisdiction under 35 U.S.C. § 6(b). We affirm-in-part.

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[1] This appeal is related to another appeal for Application 10/601,992 (Appeal No. 2009-002076). App. Br. 2, 42 (Rel. Proc. App'x).

STATEMENT OF THE CASE

Appellant's invention manages admission of requests to a shared media server with multiple hosting services such that they use shared resources (e.g., memory) in a desired manner. In one implementation, a "segment-based memory model" is used to determine if a requested streaming file is in memory. *See generally* Spec. ¶¶ 0001, 0010-16; 0031-36; Fig. 6. Claim 1 is illustrative with the key disputed limitations emphasized:

> 1. A method for managing admission of requests to a shared media server, the method comprising:
>
> allowing each of a plurality of hosting services access to any of a set of shared resources for serving their respective streaming files to clients, wherein said set of shared resources comprises memory; and
>
> managing admission of client requests for streaming files to each of the plurality of hosting services to ensure that a desired amount of usage of the shared resources is available to each hosting service, wherein said managing admission of client requests for streaming files comprises:
>
> receiving a client request for a streaming file to be served from one of said hosting services; and
>
> using a *segment-based memory model* to determine whether at least a portion of the requested streaming file is in the memory.

The Examiner relies on the following as evidence of unpatentability:

Jackson	US 2002/0152305 A1	Oct. 17, 2002

THE REJECTIONS

1. The Examiner rejected claims 32-35 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Ans. 3-4.
2. The Examiner rejected claims 1-4, 6-14, 16, 18-21, and 23-39 under 35 U.S.C. § 102(e) as anticipated by Jackson. Ans. 5-12.[2]

CLAIM GROUPING

Regarding the anticipation rejection, Appellant argues the following claim groupings separately: (1) claims 1-4, 7, 9, and 10; (2) claim 6; (3) claim 8; (4) claims 11-13, and 16; (5) claim 14; (6) claims 18-21; (7) claims 23-26; (8) claim 27; (9) claim 39; (10) claims 28 and 29; (11) claim 30; (12) claim 31; (13) claims 32 and 35; (14) claim 33; (15) claim 34; and (16) claims 36-38. *See* App. Br. 13-31.

For the reasons indicated in the opinion, however, we group the claims as follows: (1) claims 1-4, 6-10, 14, and 28-39; (2) claims 23-26; and (3) claims 11-13, 16, 18-21, and 27. *See* 37 C.F.R. § 41.37(c)(1)(vii).

THE § 101 REJECTION

The Examiner finds that the software code of claims 32-35 is not implemented on a computer-readable storage medium, and refers to Appellant's Specification which indicates that the software of the present invention can be communicated via a data signal. Ans. 3-4.

[2] Throughout this opinion, we refer to (1) the Appeal Brief filed September 28, 2007; (2) the Examiner's Answer mailed February 25, 2008; and (3) the Reply Brief filed April 25, 2008.

Appellant argues that the claims recite statutory subject matter since the recited software code is functional and *stored to* a computer-readable medium. App. Br. 11-12.

The issue before us, then, is as follows:

ISSUE

Has the Examiner erred in rejecting claims 32-35 by finding that the software code stored to a computer-readable medium is non-statutory subject matter under § 101?

FINDINGS OF FACT (FF)

1. According to Appellant's Specification:

> The executable instructions or software code may be obtained from a readable medium (e.g., a hard drive media, optical media, EPROM, EEPROM, tape media, cartridge media, flash memory, ROM, memory stick, and/or the like) or communicated via a data signal from a communication medium (e.g., the Internet). In fact, readable media can include any medium that can store or transfer information.

Spec. ¶ 0145.

PRINCIPLES OF LAW

Signals are unpatentable under § 101. *In re Nuijten*, 500 F.3d 1346, 1355 (Fed. Cir. 2007). According to U.S. Patent & Trademark Office (USPTO) guidelines:

> A claim that covers both statutory and non-statutory embodiments . . . embraces subject matter that is not eligible for

> patent protection and therefore is directed to non-statutory subject matter. . . . For example, a claim to a computer readable medium that can be a compact disc or *a carrier wave* covers a non-statutory embodiment and therefore should be rejected under § 101 as being directed to non-statutory subject matter.

U.S. Patent & Trademark Office, *Interim Examination Instructions for Evaluating Subject Matter Eligibility Under 35 U.S.C. § 101*, Aug. 2009, at 2, *available at* http://www.uspto.gov/web/offices/pac/dapp/opla/2009-08-25_interim_101_instructions.pdf (emphasis in original) ("Interim Instructions").

ANALYSIS

We will sustain the Examiner's rejection of claims 32-35 under § 101. Although the software code is *stored to* a computer-readable medium in these claims, that alone is not dispositive, for the computer-readable medium itself embraces non-statutory subject matter (e.g., signals) as evidenced by Appellant's Specification. *See* FF 1 (noting that the disclosed software code can be *communicated via a data signal from a communication medium*) (emphasis added).

Signals, however, are unpatentable under § 101. *Nuijten*, 500 F.3d at 1355. Where, as here, claims encompass both statutory and non-statutory embodiments, they are non-statutory under § 101. Interim Instructions, at 2. That Appellant indicates that the readable media of the present invention "can include *any* medium that can store or transfer information" (FF 1; emphasis added) only bolsters this conclusion.

We therefore find no error in the Examiner's rejection of claims 32-35 under § 101.

THE ANTICIPATION REJECTION

Regarding independent claim 1, the Examiner finds that Jackson discloses all of the recited subject matter including using a "segment-based memory model" to determine if at least a portion of a requested streaming file is in memory. Ans. 5, 6, 12, 13. Specifically, the Examiner refers to Jackson's buffer/cache and logical volume management algorithms used to retrieve information from a particular storage device/content source in Paragraph 396 as teaching the recited "segment-based memory model." *Id.*

Appellant argues that while Jackson may discuss various data caching techniques, Jackson does not disclose a memory model, let alone a segment-based memory model as claimed. App. Br. 13-16; Reply Br. 1.

Regarding claim 11, Appellant argues that Jackson fails to teach an admission controller operable to determine whether acceptance of a new request will violate, *at any point in the future*, availability of a desired amount of usage of shared resources for any of the hosting services. App. Br. 18-22; emphasis in original.

The issues before us, then, are as follows:

ISSUES

Under § 102, has the Examiner erred by finding that Jackson discloses:

(1) using a segment-based memory model to determine if at least part of a requested streaming file is in memory as recited in claim 1?

(2) an admission controller operable to determine whether acceptance of a new request will violate, at any point in the future, availability of a

desired amount of usage of shared resources for any of the hosting services as recited in claim 11?

ADDITIONAL FINDINGS OF FACT

2. Jackson's system manages content-delivery hardware to efficiently and predictably deliver content across a network. Figure 1A shows a content delivery system 1010 with interconnected system "engines" including (1) an application processing engine 1070; (2) system management processing engine 1060; (3) network interface processing engine 1030; (4) storage processing engine 1040; and (5) network transport/protocol processing engine 1040. These engines perform tasks associated with delivering content from content sources 1090 and 1100. Jackson, ¶¶ 0009-11, 0083-87; Fig. 1A.

3. Figure 11 shows a first processing engine 2100 (e.g., application processing engine 1070) interconnected to a second processing engine 2120 (e.g., storage processing engine 1040). The first processing engine 2100 executes application 2102 (e.g., a streaming media application), and the second processing engine 2120 provides the first processing engine 2100 with access to data (e.g., cached data) from storage device/content source 2130. Jackson, ¶¶ 00383-86; Fig. 11.

4. To this end, the second processing engine includes a buffer/cache 2122 and a logical volume manager 2124. Buffer/cache 2122 may include any memory management method, system, or structure suitable for logically or physically organizing or managing memory (e.g., integrated logical memory management structures). Jackson, ¶ 0387-88; Fig. 11.

5. Exemplary integrated logical memory management structures include (1) multiple memory queues, and (2) a multi-dimensional positioning algorithm for units in memory that can reflect the relative priorities of a memory unit (e.g., in terms of recency and frequency). Jackson, ¶ 0388; Fig. 11.

6. Memory-related parameters considered in operating such logical memory management structures includes any parameter that at least partially characterizes one or more aspects of a particular memory unit including (1) recency; (2) frequency; (3) aging time; (4) sitting time; (5) size; (6) fetch (cost); (7) operator-assigned priority keys; (8) status of active connections or requests for a memory unit, etc. Jackson, ¶ 0388; Fig. 11.

7. A "buffer/cache" is any type of memory or memory management scheme that stores retrieved information prior to transmitting the stored information to a first processing engine 2100 (e.g., schemes related to various types of memory pools, memory capable of caching and buffering tasks, etc.). Jackson, ¶ 0389.

8. Other suitable methods (e.g., using algorithms) that may be implemented as cache 2122 in the first processing engine 2100 can manage information management system I/O resources based on modeled and/or monitored I/O resource information. These methods may be implemented to optimize information management system I/O resources to delivery a variety of data object types, including continuous streaming media data files. Jackson, ¶ 0390.

9. To this end, these methods can dynamically adjust I/O operational parameters using a resource management architecture (e.g., a resource

manager, resource model, storage device workload or capacity monitor). Jackson, ¶ 0390.

10. The resource model can generate system performance information based on monitored storage device workload and/or storage device capacity information. The resource manager can then use this information to manage system I/O operation and/or resources. Jackson, ¶ 0390.

11. The first and second processing engines 2100, 2120 can be implemented as components of any of the information configuration embodiments described elsewhere. Jackson, ¶ 0391.

12. Figure 12 shows an embodiment where multiple first processing engines $2100_{(1)}$-$2100_{(x)}$, each executing a respective application, are interconnected to multiple second processing engines $2120_{(1)}$-$2120_{(y)}$, each having a respective (1) buffer/cache algorithm $2102_{(1)}$-$2102_{(y)}$, and (2) logical volume manager algorithm $2124_{(1)}$-$2124_{(y)}$. Each second processing engine is also coupled to a respective storage device/content source $2130_{(1)}$-$2130_{(y)}$. Jackson, ¶ 0394; Fig. 12.

13. The embodiment of Figure 12 may be implemented such that the characteristics of the buffer/cache and/or logical volume management algorithms of at least one second processing engine 2120 differ from those of another second processing engine. As such, a first processing engine 2100 can retrieve information/data (e.g., content) from a particular storage device/content source 2130 using a selected second processing engine having particular buffer/cache and/or logical volume management algorithms optimized for a file system and application on the first processing engine. Jackson, ¶ 0396; Fig. 12.

14. Logical volume manager 2124's operations include configuration (e.g., defining logical volumes and/or characteristics), loading content onto the logical volume manager, etc. Jackson, ¶ 0400.

15. Appellant refers to Paragraphs 0031 through 0036, 0082 through 0096, and 0114 of the Specification of the present application in connection with using a segment-based memory model recited in claim 1. App. Br. 4.

16. According to Appellant's Specification, "the current memory state of a shared media server at any given time may be determined through a memory state model. Such modeling of the media server's memory state provides a close approximation of the real system memory but reflects a higher-level memory abstraction." Spec. ¶ 0031.

17. According to Appellant's Specification:

> Certain embodiments of the present invention utilize a segment-based access model for representing unique, most recently accessed segments of a file. Such a segment-based access model may be used for efficiently computing a media server's memory state . . . . [C]onsidering that a streaming file may be concurrently accessed (or have overlapping accesses thereto), various portions (or segments) of the streaming file may have different time stamps at which they have been most recently accessed by a client.

Spec. ¶ 0034.

18. The Specification provides an example of a segment-based access model that represents (1) a segment (0-40 seconds) of a file that was most recently accessed at time t=10 seconds, and (2) a segment (40-50 seconds) of the file that was most recently accessed at time t=40 seconds. Spec. ¶ 0035. *See also* Spec. ¶¶ 0060-81 (detailing determining a segment-based access model of streaming media files).

19. By computing the memory state from the segment-based access model, a segment-based model of the media server's memory results. Unlike a "real" memory organization, a segment-based memory model enables efficiently determining content of such memory over time (e.g., determining file segments that are evicted from memory in favor of inserting new file segments into memory, etc.). Spec. ¶ 0036. *See also* Spec. ¶¶ 0082-96 (detailing computing a media server's memory state from a segment-based access model).

20. By determining which segments of a requested file are stored in memory (e.g., whether the prefix of a requested file is available in memory), the system can estimate memory consumption versus disk resources needed to service a requested file. Spec. ¶ 0059.

21. During the "resource availability check" procedure, a cost of a new request is evaluated by computing the shared media server's memory state using a "segment-based memory model" in the manner described previously. Spec. ¶¶ 0113-14.

22. Jackson notes that improved caching performance of continuous content may be achieved by using a layered multiple LRU caching algorithm that weighs ongoing view cache value versus the dynamic time-size cost of maintaining particular content in cache memory. Jackson, ¶¶ 0124-25.

23. Jackson's Figure 5 shows a method 100 for deterministic delivery of content responsive to a request. This technique can increase stability and predictability in delivering streaming content by predicting the capacity of a content delivery system to deliver many long-lived streams. Jackson, ¶ 0219; Fig. 5.

24. Jackson's system may reject a request for content when the system's identified required resources are not immediately available or will not become available within a specified period of time. Jackson, ¶¶ 0224, 0231, 0237, 0240; Fig. 5.

25. Jackson describes a capacity planning analyzer tool ("CPAT") that can analyze resource information or data logged by a resource utilization logger over time. Jackson, ¶ 0030.

PRINCIPLES OF LAW

"[T]he specification is the single best guide to the meaning of a disputed term, and . . . acts as a dictionary when it expressly defines terms in the claims or when it defines terms by implication." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1321 (Fed. Cir. 2005) (en banc) (internal quotation marks and citations omitted); *see also id.* ("Even when guidance is not provided in explicit definitional format, the specification may define claim terms by implication such that the meaning may be found in or ascertained by a reading of the patent documents.") (citations and internal quotation marks omitted).

Means-plus-function claim language must be construed in accordance with 35 U.S.C. § 112, ¶ 6 by "look[ing] to the specification and interpret[ing] that language in light of the corresponding structure, material, or acts described therein, and equivalents thereof, to the extent that the specification provides such disclosure." *In re Donaldson Co., Inc.*, 16 F.3d 1189, 1193 (Fed. Cir. 1994) (en banc).

ANALYSIS

Claims 1-4, 6-10, 14, and 28-39

The dispute before us turns on one key question: Does Jackson disclose a "segment-based memory model" to determine if at least part of a requested streaming file is in memory? Although this is a close question, we nonetheless answer it "no" based on the record before us.

We begin by construing a "segment-based memory model." To this end, we refer to Appellant's Specification for it is the single best guide to claim construction. *Phillips,* 415 F.3d at 1321. Although Appellant's Specification does not explicitly define the term "segment-based memory model," it nevertheless extensively discusses this model, its mathematical basis, and its application to streaming files (*see* FF 15-20)—an explanation that informs our construction and at least implicitly defines the term. *See Phillips,* 415 F.3d at 1321.

As the Specification indicates, modeling the media server's memory state in a segment-based fashion closely approximates real system memory, but reflects a "higher-level memory abstraction." FF 16. And this "memory abstraction" enables efficiently determining content of this memory over time (e.g., determining file segments that are evicted from memory in favor of inserting new file segments into memory, etc.). FF 19. With this "abstraction," the system can estimate memory consumption versus disk resources needed to service a requested file. FF 20.

To this end, a "segment-based *access* model" is determined to uniquely represent the most recently accessed segments of a streaming file. FF 17-18. This "access model" is then used as a basis for deriving the "segment-based *memory* model." FF 19.

Based on these descriptions, we therefore construe a "segment-based memory model" as a high-level abstraction that (1) represents real system memory to enable efficiently determining content of this memory over time on a segment-by-segment basis, and (2) is derived from a segment-based access model that uniquely represents the most recently accessed segments of a streaming file.

With this construction, we find the Examiner's reliance on Jackson's buffer/cache and logical volume management algorithms in Paragraph 0396 as allegedly disclosing the recited "segment-based memory model" (Ans. 12-13) problematic. Apart from merely reproducing text from the reference and highlighting the terms "logical volume management algorithm," the Examiner does not explain how or why this algorithm constitutes a "segment-based memory model" as claimed, let alone explain how this algorithm determines if at least part of a requested streaming file is in memory. *See id.* This shortcoming is particularly acute given the unique functionality of the recited "segment-based memory model" noted above—an abstraction that efficiently determines content of this memory over time on a segment-by-segment basis. FF 19.

That said, however, Appellant's contention that Jackson "simply provides *no teaching whatsoever* of modeling the memory" (App. Br. 16; emphasis added) is overstated. Jackson does, in fact, use modeling techniques to manage system I/O resources to deliver continuous streaming media data files. *See* FF 8. And Jackson notes that a resource *model* can be used as part of a resource management architecture to generate system performance information based on monitored storage device workload and capacity information. FF 9-10. Notably, memory-related parameters are

also considered in Jackson's logical memory management structures—namely, any parameter that at least partially *characterizes* one or more aspects of a particular memory unit (e.g., recency, frequency, aging and sitting time, request status, cost, etc.). FF 6; emphasis added. We see no reason why this memory "characterization" would not be tantamount to modeling.

Although these modeling techniques are described in connection with the embodiment of Jackson's Figure 11 (*see* FF 3-10), they are nonetheless applicable to the embodiment of Figure 12 (*see* FF 11)—the embodiment corresponding to the Examiner's citation (i.e., Paragraph 0396; Ans. 13). In any event, Jackson's Figure 12 embodiment is similar to that of Figure 11 except that it involves selecting from multiple first and second processing engines (and their corresponding buffer/cache and logical volume management algorithms). *Compare* FF 3 *with* FF 13.

Despite Jackson's references to modeling in connection with memory management for streaming media applications, we still fail to see how these general references (or any other functionality in Jackson) constitute a "segment-based memory model" as claimed when construed in light of the Specification. Jackson's "second processing engines" include two algorithms that are relevant in this regard: (1) a buffer/cache algorithm, and (2) a logical volume management algorithm. FF 3, 4, 12, 13. We therefore consider each in turn.

A "buffer/cache" is any type of memory or memory management scheme that stores retrieved information prior to transmitting the stored information to a first processing engine (e.g., schemes related to various types of memory pools, memory capable of caching and buffering tasks,

etc.). FF 7. Jackson' buffer/cache algorithm can include any memory management method, system, or structure suitable for logically or physically organizing or managing memory (e.g., integrated logical memory management structures). FF 4. These integrated logical memory management structures can include (1) multiple memory queues, and (2) a multi-dimensional positioning algorithm for units in memory that can reflect the relative priorities of a memory unit (e.g., in terms of recency and frequency). FF 5.

While Jackson's buffer/cache algorithms (1) pertain to memory management, and (2) consider a temporal component in assessing relative memory unit priorities in terms of recency and frequency (FF 5), we still cannot say that these algorithms constitute a "segment-based memory model" as construed in light of the Specification. That is, from the record before us, we cannot say—nor has the Examiner shown—that these algorithms necessarily constitute a high-level abstraction that (1) represents real system memory to enable efficiently determining content of this memory over time on a segment-by-segment basis, and (2) is derived from a segment-based access model that uniquely represents the most recently accessed segments of a streaming file.

We reach the same conclusion regarding Jackson's logical volume management algorithms. Here again, although these algorithms contribute to the logical volume manager's configuration (e.g., defining logical volumes and/or characteristics), content loading, and retrieval capabilities (*see* FF 3, 4, 13, 14), we still cannot say that these algorithms constitute a "segment-based memory model" as construed in light of the Specification. To assert that these logical volume management algorithms necessarily

constitute a high-level abstraction that (1) represents real system memory to enable efficiently determining content of this memory over time on a segment-by-segment basis, and (2) is derived from a segment-based access model that uniquely represents the most recently accessed segments of a streaming file would require us to resort to speculation. That we will not do. Nor will we engage in such an inquiry in the first instance on appeal.

We therefore conclude that the Examiner erred in rejecting independent claim 1, and independent claims 28, 32, and 36 which recite commensurate limitations.[3] We likewise reverse the Examiner's rejection of dependent claims 2-4, 6-10, 14, 29-31, 33-35, 37, and 38 for similar reasons.

Claims 23-26

We will, however, sustain the Examiner's rejection of independent claim 23 which recites, in pertinent part, determining a "cost" to one of the hosting services for serving a requested streaming file based at least in part on a *modeled memory state* of the shared resources.

We emphasize the term "modeled memory state" for, unlike the other independent claims noted above, the term "segment-based" in connection

[3] Although independent claim 36 does not explicitly recite a "segment-based memory model," it is nonetheless recited in means-plus-function format under § 112, sixth paragraph and is therefore construed to cover the corresponding structure described in the Specification and its equivalents. *Donaldson*, 16 F.3d at 1193. Since the recited "means for performing a resource availability check" corresponds to functionality that computes the shared media server's memory state using a "segment-based memory model" as noted above (*see* FF 21), Jackson likewise fails to disclose the corresponding structure to this limitation for the reasons noted previously. *See* App. Br. 9-10 (identifying at least Paragraphs 0113 through 0115 as corresponding to this limitation).

with this model is absent from claim 23. Notably, however, the term "segment-based model" appears in dependent claim 39. Claim differentiation principles alone therefore suggest that Appellant apparently envisions some other type of model to constitute a "modeled memory state" in independent claim 23; otherwise, claim 39 would be superfluous.[4]

Based on the scope and breadth of this limitation, we see no reason why Jackson's modeling capabilities noted above (*see, e.g.,* FF 4-10) would not constitute, at least in part, a "modeled memory state" of shared resources as claimed, particularly since these modeling capabilities are involved in memory and resource management functions. *See id.* Appellant's contention that Jackson fails to teach such a "modeled memory state" for the reasons noted in connection with claim 1 (App. Br. 24) is simply not commensurate with the scope of the limitation.

Moreover, Jackson's content delivery system also determines cost based, at least in part, on this "modeled memory state." *See, e.g.,* FF 6 (including cost as a memory-related parameter that is considered in operating a logical memory management structure); *see also* FF 22 (algorithm using cost as a basis for improved caching performance of continuous content).

We are therefore not persuaded that the Examiner erred in rejecting representative claim 23, and claims 24-26 which fall with claim 23.

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[4] "The doctrine of claim differentiation creates a presumption that each claim in a patent has a different scope. . . . The difference in meaning and scope between claims is presumed to be significant to the extent that the absence of such difference in meaning and scope would make a claim superfluous." *Free Motion Fitness, Inc. v. Cybex Int'l, Inc.*, 423 F.3d 1343, 1351 (Fed. Cir. 2005) (internal quotation marks and citations omitted).

Claims 11-13, 16, 18-21, and 27

We will also sustain the Examiner's rejection of independent claim 11 which calls for, in pertinent part, an admission controller operable to determine whether acceptance of a new request will violate, *at any point in the future*, availability of a desired amount of usage of shared resources for any of the hosting services.

We see no error in the Examiner's reliance on the functionality described in Jackson's Paragraph 0240 (Ans. 16 (referring to Ans. 15)) for this limitation. This passage describes a deterministic content delivery method detailed in Figure 5 that rejects requests for content when the system's identified required resources are (1) not immediately available, or (2) *will not become available* within a specified period of time. FF 23-24.

Jackson's word choice here is telling. By specifying that resources are identified that will not *become* available within a specified period of time, those resources will therefore be unavailable for some future time period. *See id.* As such, Jackson's rejection of these requests effectively determines that their acceptance would violate availability of those resources at least for that future time period. *See id.* That Jackson predicts the capacity of the streaming content delivery system in connection with this technique (FF 23) and can utilize other capacity planning tools (FF 25) only bolsters our conclusion that Jackson assesses the future availability of shared resources.

We are therefore not persuaded that the Examiner erred in rejecting representative claim 11, and claims 12, 13, and 16 which fall with claim 11.

We also sustain the Examiner's rejection of claims 18-21 and 27 which recite commensurate limitations.

CONCLUSION

The Examiner did not err in rejecting (1) claims 32-35 under § 101, and (2) claims 11-13, 16, 18-21, and 23-27 under § 102. The Examiner, however, erred in rejecting claims 1-4, 6-10, 14, and 28-39 under § 102.

ORDER

The Examiner's decision rejecting claims 1-4, 6-14, 16, 18-21, and 23-39 is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

pgc

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